

LEARNING FROM RUMOBIL

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Authors Dana Sitányiová, Francesco Edoardo Misso, Irina Di Ruocco, Filippo E. Pani
Contributors RUMOBIL partners
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1. Objectives of the project

RUMOBIL was a project supported by Interreg Central Europe based on transnational cooperation between public authorities and their transport entities who are confronted with a similar challenge to respond to pressures on regional public transport systems caused by demographic change in peripheral areas. Working together in RUMOBIL provided partners a platform to exchange their knowledge, to generate learning through pilot applications of state-of-the-art tools and solutions and revise their transport policies to better suit changing mobility needs. Main outputs of RUMOBIL were the pilot actions, the elaboration of a RUMOBIL Strategy and policy-decisions to implement it in the eight partner regions (Saxony-Anhalt (DE), Modena (IT), Vysočina (CZ), South-Bohemia (CZ), Žilina (SK), Mazovia (PL), Ozalj (HR), Szabolcs-Szatmár-Bereg (HU)) through an improvement of their transport plans. Pilot actions allowed testing a number of innovative applications how sparsely populated peripheral areas can be better linked to a primary, secondary or tertiary transport node (access to European and national passenger transport networks). Pilots were undertaken in three fields of concern:

- New approaches and transport services to link rural towns to national and EU transport networks;
- Improvement of access points to public transport networks to render offered services more attractive; and
- Enhancement of passenger information to promote the use of public transport in rural areas.

The transnational RUMOBIL Strategy indicated to CE regions innovative and transferable public transport approaches - based on jointly analysed good practices, the combined knowledge of the partners and involved stakeholders, learning from the pilots, and fresh ideas put forward through a transnational social media-based competition. The strategies' implementation across the partner regions was prepared through work papers focusing on different aspects of transport policies and forecasts how demand for public transport will develop in coming years. Finally, decisions to revise the transport plans in light of the RUMOBIL Strategy were introduced to policy-makers. Communication activities aimed to lead to political support for a change of transport policies and the strategy's adoption beyond the partner areas. All outcomes were jointly assessed in site-visits, transnational workshops and a coordinated evaluation under the auspices of research institutions participating in RUMOBIL. More information on project is available here <https://www.interreg-central.eu/Content.Node/rumobil.html>.

2. Pilot/project preparations

2.1. Stakeholder involvement

Several pilots were undertaken in partner's regions. Stakeholders - parties (organisations, individuals) that had an interest in a project, and could either affect or be affected by the project were addressed to participate in all three phases of each pilot: its preparation and technical specification, implementation period of 12-18 months, and the following assessment of its success. Citizens' and stakeholders' involvement were a precondition for successful pilots, since long-term perspective of measure requires a high degree of support and acceptance. The main project stakeholder was a group of residents who were awaiting the arrival of a better transportation system and services in the region. Besides residents there were different types of stakeholders in partner's regions. To raise their awareness and to promote the participation of stakeholders in all pilot phases, a transnational publicity campaign was rolled out too. Moreover, transport policy decision-makers from all partner territories were invited to take part in study trips and other project activities to learn more about RUMOBIL pilots being implemented elsewhere to consider their possible transfer.

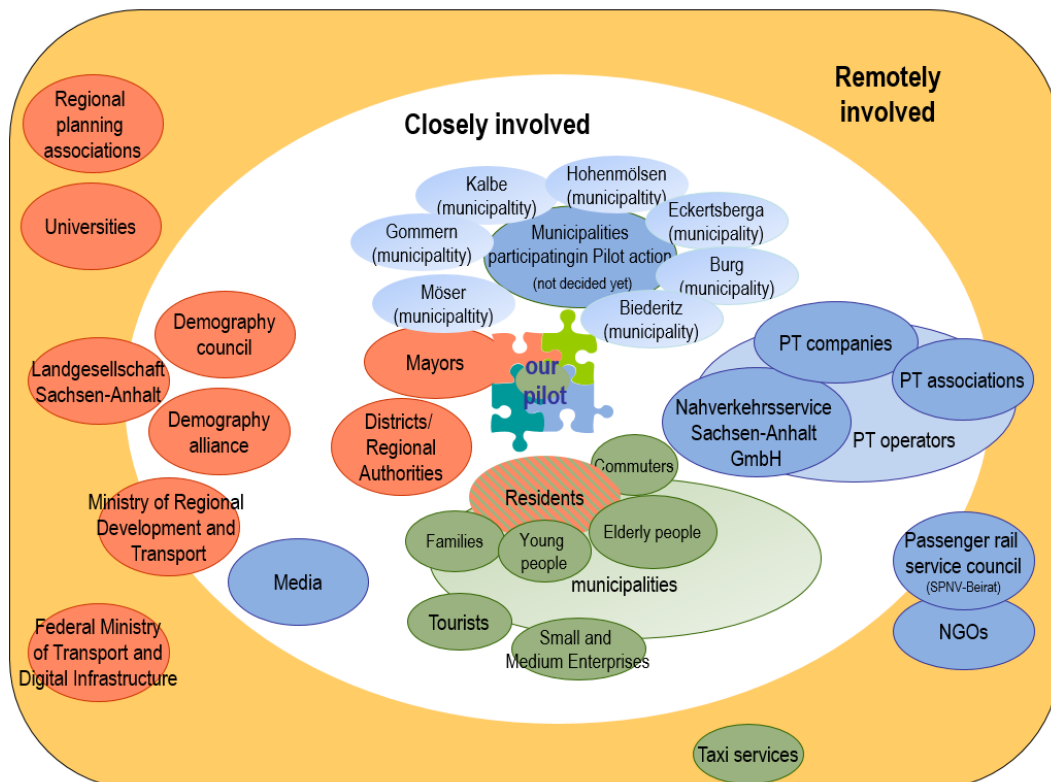


Stakeholders were crucial to the success of each pilot. Because of this fact manual with brief recommendations how to work with stakeholders for all piloting partners was prepared. Partners were asked to follow the common approach. All partners had to involve stakeholders in all piloting stages to collect their input and feedback.

Potential stakeholders were divided into three categories:

- **Primary stakeholders:** Who were ultimately be affected by new transport measures (e.g. different social groups - certain municipalities or village communities, elderly people, young people, employed and unemployed people, business branches, organisations, etc.).
- **Key actors:** Who had political responsibility (mayors, other authority levels); financial resources (public and private funds); the authority (by domain or territory); the skills and expertise (public administrations, universities, private sector) in transport and related domains (land use, environment, education, health, tourism, etc.).
- **Intermediaries:** Who implemented transport policy (PT and infrastructure operators, public administrations, police, etc.). Who carried out major transport activities (PT operators). Who represented pertinent interest groups (associations, chambers, cooperatives, networks, NGOs). Who informed and reported on transport (authorities, operators, local media).

The stakeholder identification process was one of the most important processes in each pilot project management, because projects were undertaken to fulfil the requirements of stakeholders who would benefit from it. To satisfy and fulfil the requirements of stakeholders, all piloting partners had to identify all relevant stakeholders in their regions. In RUMOBIL project the tool developed by the 7th FP research project - Changing Behaviour was used. Partners were asked to create the map of stakeholders (Fig. 1).



1. Figure Example of stakeholder map from Saxony-Anhalt region

2.2. Each potential stakeholder occupies a color-coded bubble (colours stand for the different kinds of stakeholders: green - primary stakeholder, orange - key actor, blue - intermediary). Stakeholders are moved



around the pilot project, putting them closer or further away (the proximity indicates the strength of relationship need to be built with them, and their importance). Stakeholders were engaged through the whole pilot lifecycle. Several meetings were organised with them. Partners were asked to keep the composition of the stakeholder group the same as much as possible during the whole pilot. After the first meeting stakeholders were continuously kept up to date on what is going on in the pilot. T2 leader prepared recommended indicative plan for stakeholders' involvement tasks as well as template to be completed by partners as a base for common Stakeholders' involvement report. The most important element in stakeholder communications was identifying the target audience. Because of that partners were asked to create the maps of stakeholders and stakeholder involvement reports to better manage communication with all stakeholders' groups. It also helped them to keep communication active, and enough frequent. Different methods for communicating were used. One of the most common ways to communicate were personal meetings and workshops, conference calls, and emailed updates.

2.2. Methods and technologies

During the RUMOBIL project partners used obvious project management and implementation methods. Work was divided into several phases, 4 work packages and 5 Investments.

Preparation phase – 12.2014 - 03.2016

Consortium was established, consisting of 13 partners from Central Europe, including bodies responsible for organisation of PT in regions, administrative bodies, PT providers, consultancies, and academic institutions.

Implementation phase – 06.2016 05.2019

Work packages included Management, Thematic work package T1 - Exchange of experience & innovative public transport policies for peripheral regions, Thematic work package T2 - Demonstrating and testing innovative approaches for an improved passenger transport network and Communication. There were five investment specified, I1-I5. Different methods and technologies were used in thematic work packages T1 and T2.

2.2.1. Thematic work package T1

The objective of T1 was to improve passenger transport strategies in regard to the quantity and quality of services provided to link peripheral areas with declining and aging populations to European and national transport networks. The activities of this WP were therefore led to a transnational and transferable RUMOBIL Strategy based on analysed good practices, learning from RUMOBIL pilots and state-of-the-art technologies and decisions by the legally competent bodies to enhance the transport strategies and plans for each of the 8 territories addressed by RUMOBIL. In the first one, partners investigated available good practices, involved transport stakeholders, and discussed different challenges and technology-based opportunities to rural areas' public transport through work papers. Four work papers were prepared as outputs (Opportunities and boundaries of transport telematics; New patterns in public transport demand due to demographic change; Macro-economic benefits from public transport in rural areas; Learning from good practices). By the end of 2017, the transnational RUMOBIL Strategy was passed by the participants of a policy conference. In the following second phase, the addressed territories existing transport framework, expected future transport demand and the learning from implemented RUMOBIL pilots (T2) were analysed together with stakeholders in order to prepare the decision-making processes leading to the implementation of the RUMOBIL Strategy through improved transport strategies and plans. The necessary decisions were taken by the legally competent bodies by the end of the project lifetime. Results of T1 were therefore improved public policies enhancing the connectivity of regions with more than 10m inhabitants through an optimised public transport network.



2.2.2. Thematic work package T2

The objective of T2 was to experiment different approaches for public passenger transport in rural peripheral areas. Eight pilots were undertaken as described below. Detailed description of two of them implemented in Czech Republic is provided in Annex. The learning from the pilots was transferred to T1 for the implementation of the RUMOBIL Strategy. When implementing pilots, partners used different methods and technologies.

The first group of pilots focused on testing new approaches and transport services to link rural towns to national and EU transport networks. Patterns of movement in target rural communities are too dispersed to be handled efficiently by conventional public transport and, as a result, it requires high subsidies to remain PT in operation. Therefore, there has been a decline in rural PT in recent years resulting also in reductions in support for bus services. Pilots in Czech Republic focused on testing new bus lines in frame of a planned PT network wide concept to be introduced in future. This will be built on framework of integration of rural, and inter-urban bus and rail services, and involvement of communities in the planning and development of transport services. Pilots focused on verifying demand for new connections of public bus transport in Vysočina and South-Bohemia region. Pilot in Saxony-Anhalt was based on involvement of communities in the planning, development and running of transport services to provide community-based transport, as a part of the public transport network using integrated approach to achieve efficient provision.

HŽ Passenger Transport, Limited Liability Company introduced thematic trains in Ozalj region to support local economy and increase usage of rail transport. This pilot followed a growing trend of interests of modern tourists for various forms of thematic tourism, that not only tour operators, but also PT operators can adapt to their business and marketing strategies. Pilot enabled tourists, but also other target groups to perceive different local values of Ozalj region.

Two pilots dealt with improvement of access points to public transport networks to render offered services more attractive. A quality connection between the rural and urban areas is a key factor in preventing major exodus into urban centres. Pilot in Slovakia tried to reduce interchange barriers at rural intermodal node by bringing and improving services and modes in one place. Several measures implemented significantly improved interchange facilities and passenger information. Pilot in Hungary aimed in modernisation of bus stops for easier access and increase of comfort and attractiveness of PT system as well as passengers' information on the bus line connecting regional capital with rural area.

Other two pilots tried to enhance passenger information to promote the use of public transport in rural areas. Partner from Modena region provided already running demand-responsive service by the new system of reservation via new mobile app, while a partner from Poland introduced real-time passenger information for rail transport in the Mazovia region.

2.2.3. Communication C

Detailed Communication Strategy specified the internal communication means to be used, the tools to involve stakeholders in all relevant phases of the project, and the dissemination of achievements beyond the partner territories. For each communication activity designed, the tasks of each partner, the target groups (stakeholders, key actors, media), the timing and sequence of activities, and the messages to be communicated were identified. To increase awareness among stakeholders within and beyond the partner territories for the RUMOBIL project, a transnational competition to collect new ideas for public transport in rural areas was rolled out. All partners contributed to dissemination activities. Communication and dissemination means included presentations at expert events, publications in relevant journals and articles in newsletters of European networks. Furthermore, the RUMOBIL Final Conference was organised to support the communication of the project results.



2.3. Risks and obstacles

Besides the obstacles related to the socio-demographic issues, partners have faced the following challenges:

- Long approval procedures at region administration and public procurement procedure;
- Later start of the project and short time for the implementation of the pilots;
- Failure to include all stakeholder requirements;
- Financial aspect: for example, in the Czech Republic in 2017 the labour costs of bus drivers in public transport increased significantly, with a consequent increase in public transport operating costs;
- Communication with stakeholders: it was sometimes very hard, especially in waiting for an answer and asking for think which they do for free;
- Insufficient information campaign to local residents and tourists;
- Low number of passengers using new services;
- More competition: stakeholders, such as local PT operators and taxi drivers, have to be inclined to accept the new service and contribute to create a supplementary not competitive service;
- Infrastructure-related aspects: such as those related to the construction of new bus stops.

On the basis of the above-mentioned obstacles and the risks encountered during the implementation of the pilots, some measures were taken, such as:

- Improvement of infrastructure and quality of the service: improving the access time or distance that is needed to overcome to get to a service stop. In order to make public transport in both pilot areas more attractive the Citizen Bus implementation was accompanied by a densification of bus stops in each settlement along its routes. In this way number of bus stops in substantially increased.
- Participation measures: much effort was done in order to attract attention and promote the new service. During the whole implementation phase of the pilots an active participation of residents and local stakeholders was crucial. An information event, a workshop informed relevant stakeholders on the RUMOBIL project.
- Communication measures through workshop, debate, call for ideas aim to raise awareness on sustainable mobility and to make the participation of stakeholders and citizens stronger. With regard to communication measures various forms of solicitation have been provided such as promotional materials as leaflets and giveaways, creation of short video clip to explain how Citizen Busses work, present their advantages and promote the approach to be used by other communities.
- Technologies/information measures: Measures to make a service more attractive and, above all, simple refer to the real-time information that can really improve the quality of a service. Other actions focus on helping people to plan their trips, to make decisions, or to manage booking services and ticket buying.

3. Pilot/project implementation

In total 8 pilot projects were implemented. Here we provide short description of each of them.



3.1. New bus service in Saxony-Anhalt (DE)

The Ministry of Regional Development and Transport of Saxony-Anhalt together with its in-house transport agency NASA aimed at introducing a new bus service operating according to the demand of residents. A “Citizen Bus”, in German “Bürgerbus” operated by local communities and volunteers represents a highly innovative and cost-effective approach for connecting rural/peripheral areas. The approach was tested in two municipalities (Möser, Osterburg) with the minibuses running between remote villages and bigger towns/secondary or tertiary transport hubs. “Citizen Busses” were implemented on bottom-up concept, developed with the help of local communities. Local partners were from pilot territory, aware of local needs, and acted as contact persons as well as organizers of events. During several meetings, the stakeholders identified gaps in the public transport network, designed routes and timetables, and recruited voluntary bus drivers. Furthermore, the project was promoted in local newspapers and local information events took place. Bus stops were densified according to the need of citizens to shorten the distance between home of passengers and bus stops. For the Citizen Busses GPS transmitters and devices for ticket sales were installed to arrange ticket sales and GPS tracking in the mini bus. It also allowed an integration of the Citizen busses in real-time information systems and the planning the operation of the bus. In general, it can be said that the RUMOBIL project has led to a significant improvement in the services - especially with regard to the fine development and local mobility. Above all, those parts of the towns that were previously only insufficiently connected to the town centre benefited the most from the introduction of citizen buses.



2. Figure Road Show to present Citizen Bus in different settlements around Osterburg

3.2. Thematic trains in Ozalj region (HR)

The implementation of pilot focused on the rail line linking peripheral areas of Karlovac County with Karlovac and Zagreb, hence an area most affected by depopulation and where the improvement of transport access to the national and therefore European passenger transport network is still seen as a strategic mean to confront this challenge. The main objective of the pilot project was to raise awareness of public transport in Ozalj region and to attract more people to use rail transport. Other specific objectives included enhancement of local economy, especially tourist industry, support for local producers, shopkeepers and cultural organisations by attracting more people to visit Ozalj region. To reach stated targets HŽ Passenger Transport Limited Liability Company prepared a series of thematic trains. In total 37 trains were dispatched on the line Zagreb-Kralovac-Ozalj in period March 2017-March 2018. Each train was connected with special event, out-door activity, or visit of historical or natural places in Ozalj region. When organizing each special train and its content, HŽ PP cooperated with local stakeholders, like municipality of Ozalj, and other 20 stakeholders representing local organisations, and businesses. During the pilot project implementation, good lessons were learnt how to coordinate transport offer, cooperate with different stakeholders and how to



create an interesting event. Pilot was supported by complex publicity campaign, performed by professional company.



3. Figure Tourist guides in train and promotional materials for thematic train

3.3. Verifying demand for new connections of public bus transport in Vysočina (CZ)


Together with the efforts towards the “Public Transport of Vysočina” conception, the RUMOBIL pilot aimed at improving offer of public transport connections as a key condition for development of mobility of population, in terms of linking rural areas to major settlements as well as to transport networks of national and EU importance. The pilot strived to test and verify demand for new public bus transport connections. To sum up the whole pilot period (March 2017 - June 2018), there was a total of 34 newly introduced public bus transport connections, operated on 4 existing lines, both on working days and at weekends, by 4 bus transport operators. During this period, buses on pilot connections covered a total distance of almost 204 000 kilometres and transported more than 75 000 passengers. The pilot experimented innovative integrated approach for providing public passenger transport in peripheral areas. Tested measures combined “standard” existing solutions, designed by the current regional public transport system, with ongoing preparations to launch the future integrated system “Public Transport of Vysočina”. Developing such a system will facilitate easy and accessible mobility between rural areas and important regional nodes, where access to the national and European (TEN-T) transport network is available. The pilot connections contributed to improvement of accessibility of rural municipalities and their connection to important nodes of regional or sub-regional importance, that are significant centres of education, employment and various public services for the inhabitants (regional capital Jihlava, cities of Třebíč and Havlíčkův Brod, town of Velké Meziříčí). Of course, these centres also serve as traffic junctions and interchange points between transport modes. One of the pilot lines also strengthened connection to the locality of Světlá nad Sázavou and Lipnice nad Sázavou, which is an attractive tourist destination as well as an important interchange point with railway.



4. Figure Tourists getting on the pilot bus in Lipnice nad Sázavou

3.4. New bus line through the area of the Slepíčí hory (CZ)


The area of pilot project was a rural area with low density of population close to the town Kaplice in South Bohemia, village close to the main railway line České Budějovice - Linz, the part of the TEN-T network. Railway station is located 5 kilometres far from the town of Kaplice and it is not very used for travelling to Kaplice region compared to the direct bus lines. The aim of the new pilot bus line was to change the current situation. The second objective was to learn how to use rail transport more to reach the pilot region and to make the region more visible. The ultimate goal, perhaps most important, was to improve the quality of life in the pilot area, and to keep the population here, in order to increase the number of people in the region. The new pilot bus line was led from the railway station Kaplice to operate neighbouring municipalities and settlements/solitudes with the destination city of Benešov nad Černou. Pilot bus connected region with long-distance and regional trains, which have further connections to all directions of the South Bohemian Region and beyond its borders (for example, the capital city of Prague and the neighbouring Austria). The line helped to improve the availability of public transport in the area (including weekends and public holidays, especially in places where access was not available). The secondary objective - to allow tourists access to the area - has been fulfilled successfully too. Despite the short test period of the pilot project, which covered the tourist season for only 3 months, there was a considerable interest of both individual tourists and organized groups (senior clubs, tourist clubs, scouts and campsites, but also schools that used the bus for a school trips).


RUMOBIL

BUSEM DO SLEPIČÍCH HOR

v provozu 1.4.2018 - 31.7.2018

- Pilotní provoz autobusové linky Kaplice nádraží / Besednice / Soběnov / Benešov nad Černou.
- V provozu denně včetně víkendů a státních svátků.
- Přímá návaznost na vlakové spoje.



Sleva 30%*

*Cestující, kteří se prokážou platnou vlakovou a autobusovou jízdenkou z pilotní linky, mají nárok na 30% slevu ze vstupného na hrad Pořešín a do expozice středověké kovárny. Cestující získají zdarma výtisk mapy středověké Zemské cesty z Českých Budějovic do Rakouska, na které leží 15 hradů a zámků.


TURISTICKÉ CÍLE

HRAD POŘEŠÍN
Hrad Pořešín, založený okolo roku 1280, vybudoval na strmém ostrohu nad řekou Malš. Býval se Strakonice. Vypálen a podoben v roce 1433. Dnes je sídlem sdružení Hradů na Malši. V areálu je muzeum, kuchyně, kovárna a krčma.


BESEDNICE
Na okraji obce se nachází rozhledna Slabobolka, z které je unikátní výhled do širokého okolí, je možné zde přehlédnout celé panství hradu Pořešín. V obci sídlí firma Kovařství Ferencač, kterou je možné navštívit a seznámit se s prací jihočeských uměleckých kovářů. Z obce vede značená turistická trasa na nejvyšší horu Slepíčích hor - Kohout 871 m.n.m.

SOBĚNOV
Východí bod cesty na hrad Sokolet, představující opravdové sokolí hrázdo uprostřed divoké přírody a bouřících vod řeky Černé. Po toku řeky Černé je možné se mezi divokými skalami a vodou vrátit na hrad Pořešín.

BENEŠOV NAD ČERNOU
Brána do Novohrádeckých hor. Památková rezervace s několika zachovalými pozdně středověkými domy, jejichž stavitel byl Jakub Kolín z Jelčan a kostelem sv. Jakuba. Okolo obce vede značená naučná stezka. Z obce je možné po značené stezce navštívit hrad Sokolet, případně trasu prodloužit až na hrad Pořešín.



Více informací
www.jikord.cz/uredni-deska/rumobil
www.facebook.com/jikordrumobil



5. Figure Poster promoting RUMOBIL bus line



3.5. Real-time information at bus stop (HU)

The pilot was situated in the Eastern part of Hungary, within Szabolcs-Szatmár-Bereg County, near to Nyíregyháza, the county's capital city. The Nagykálló-Nyíregyháza bus line is Nagykálló's main public transport service linking the town to the European and national public transport networks. The quality of this service is crucial to increase the attractiveness of public transport. Due to frequent road congestion, bus services are often delayed, but before pilot implementation there was no information provided to waiting passengers, leading to frustration and a bad reputation of the bus service. In recent years, the quality of bus stops deteriorated, and were generally regarded as inappropriate for longer waiting time. Two Hungarian RUMOBIL partners aimed to test if investments in the quality of bus stations along selected bus route can lead to increase of usage of public transport. The passenger information boards' installation was coordinated with the refurbishment of the bus stops. Boards provide real-time information collected via GPS from buses, also WiFi accessibility contribute to public inclusion and increasing of bus-stop's attractiveness. Design of bus stops was prepared together with local youth. Parallel with the installation partners launched the publicity campaign in which information materials, posters were printed and disseminated.



6. Figure Real-time information board at redesigned bus stop

3.6. Improving a rural multimodal transport hub at Rajecké Teplice (SK)

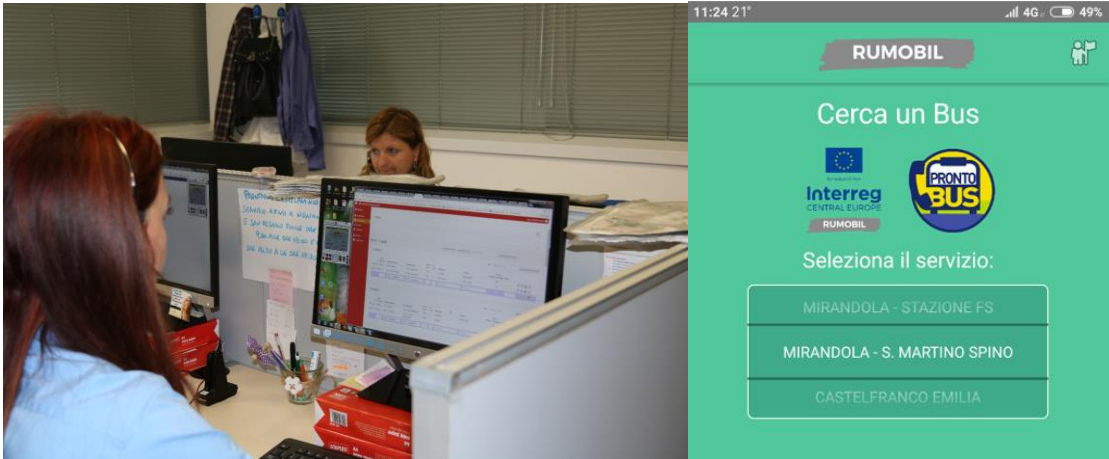
The aim of the project was to restore the intermodal connection hub in the small spa town of Rajecké Teplice in order to serve better to the local people and promote intermodal transport in the rural partner territory. The project aimed to modernize the area in the bus station, to provide monitoring panels informing about the departure and arrival of the public transport lines and to provide a place of connection with a sufficient number of parking spaces for bicycles and cars. The improved station acts as an interface between the various modes of transport and potentially it will increase the ratio of people going to work using public transport and consolidate the entire public transport system in the pilot area. Another aim of the pilot project was to examine how the level of multimodal hub services for commuting passengers using public transport influences their travel behaviour.



7. Figure Real-time information board at bus stop and box for bicycles

3.7. New software to better direct on-demand bus in Castelfranco Emilia (IT)

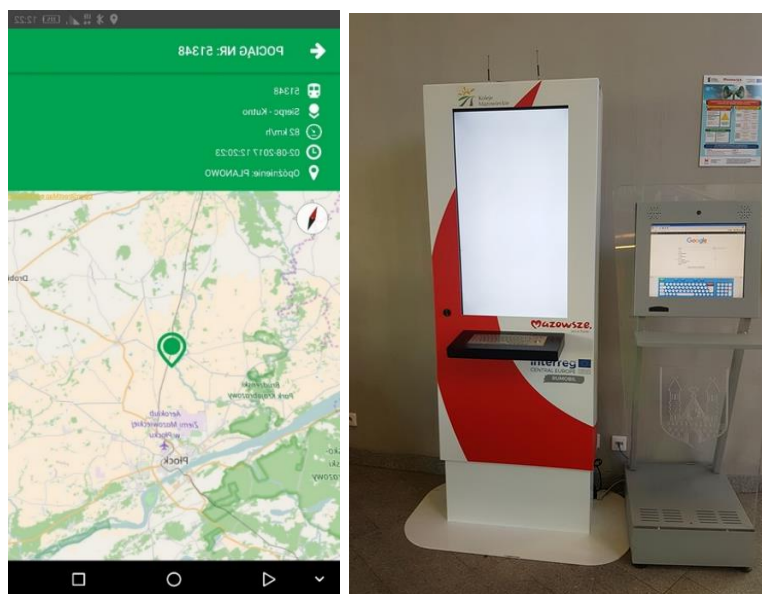
A flexible and demand-responsive transport (DRT) systems have been identified as one of the promising solutions for widespread public transport in rural areas during RUMOBIL project. The DRT service called Prontobus was established in Modena region in order to integrate the conventional PT service (based on fixed lines and timetables). The City of Castelfranco Emilia in Modena Province, site of the pilot project, is located east of Modena (about 13 km along). Target area comprises Castelfranco and eight villages with population 32861. Before RUMOBIL intervention the service was available with reservations that could be made only through a call center. The call center handled reservations manually and no information about service was provided to users. The lack of information about the provision of the DRT service has been highlighted by users - through a phone survey - as one of the main difficulties in accessing it. Main pilot objective was to significantly improve information and accessibility to the DRT service that was actually underused compared to its potential. The specific aims of the pilot action were as follows: increase the number of users by improving the information on the service and especially the possible travel possibilities offered; improve the integration of the various public transport modes existing in the territory and the quality of public transport offered; better connect the rural areas to the main European (TEN-T) and national transport network that are available in the area; improve the performance of the reservation center giving a tool that simplify the activities of recording and reporting the DRT services. RUMOBIL pilot project tried to reach these aims by implementing a new software application connected to a web portal specifically dedicated to the information about DRT services.



8. Figure Reservation system used at call center, App RUMOBIL for users (to the right)

3.8. Real-time information about train services in Koleje Mazowieckie (PL)

Improving passengers' information systems is one of the small steps, which can help by giving users, and especially potential users' confidence in using rail services. Information about rail services has been substantially transformed in recent years. Real-time information systems enable passengers to access that information simply. This is very useful especially for any reason reliability cannot be guaranteed and situation is uncertain. If there is a long delay of next service shown, passenger can use another mode, or do something else and come back to stop later. However, if user knows that the real-time information is reliable and if the train is only few minutes away, he will probably decide to wait. Mazowieckie voivodeship implemented new information system in the North-western part of Mazovia at two railway lines, Nasielsk - Sierpc, and Sierpc - Kutno. The region in which the pilot project is located is about 120-150 km away from Warsaw. This is a typical farming region, without a big industry (except for the Plock refinery) with low population density. The aim of the pilot project was to increase the number of train passengers in the target area by implementation of the new real-time passenger information system. To reach this goal, several measures were implemented, that allow passengers to plan their trips more effectively including installation of GPS transmitters to trains, app for mobile phones to allow users to get information on train movement in real time, and interactive kiosks at railway stations.



9. Figure Mobile app screenshots, infokiosk at the railway station (to the right)

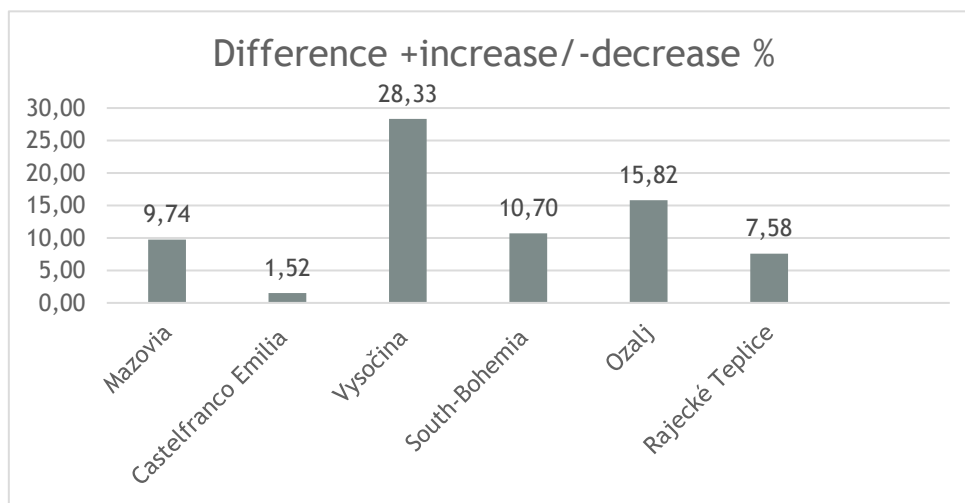
4. Results

Eight pilot actions allowed testing a number of innovative applications during a period 2017-2019 how sparsely populated peripheral areas can be better linked to a primary, secondary or tertiary transport nodes. These pilots were experimental trials, small-scale, short-term projects, which helped partners to learn how a larger-scale project might work in practice, in future, in region. Pilot projects provided platform for the organizations to test measure, prove value and reveal deficiencies before spending a significant amount of time, energy or money on a larger-scale project. All pilot projects began with a proposal listing the objectives of the project. A set of indicators was defined to measure outputs against goals of pilots and RUMOBIL project as well. In total 50 indicators were evaluated. All partners gathered data from their pilot regions with the aims to give an overview on baseline situation in region before and after pilot



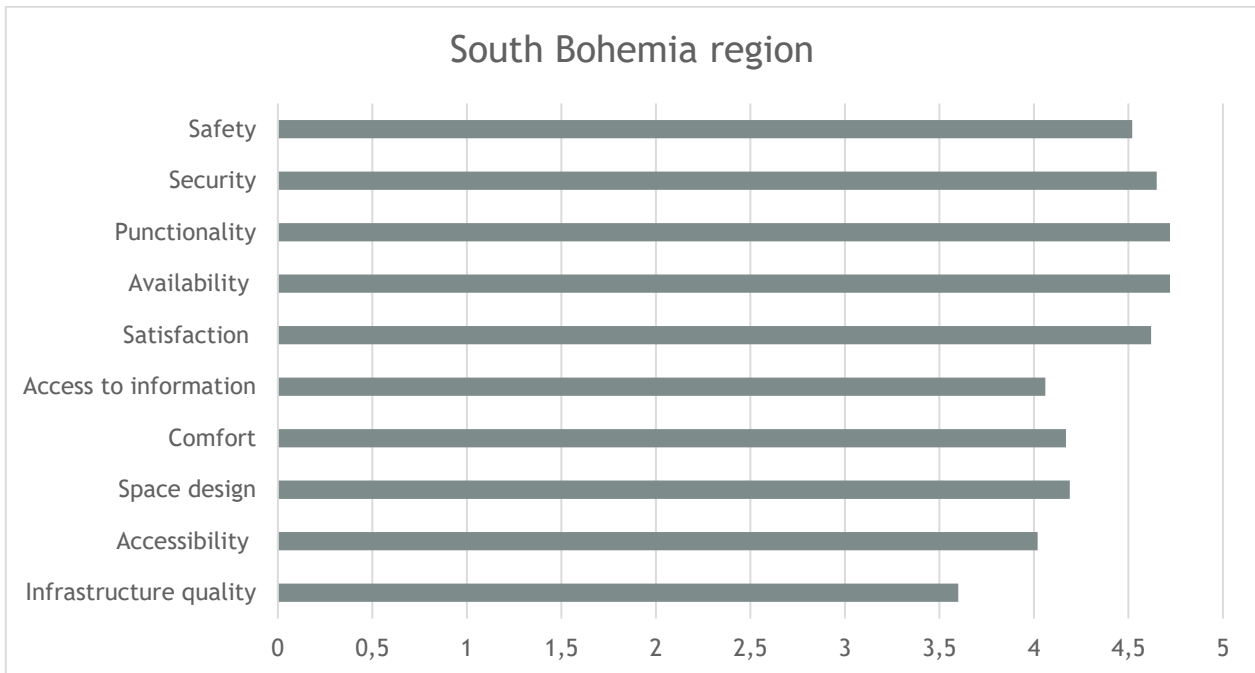
implementation, measure project impact in future, measure users' satisfaction with pilot measure, prepare transport demand prognosis.

In all partner regions there was an increase of public transport service usage recorded in target area. In German regions service was established as a new one and local PT companies were not able to provide data for RUMOBIL target area for whole public transport services, hence it is not possible to compare total number of passengers before and after pilot implementation. The same situation was in Szabolcs-Szatmár-Bereg County. Fig 10 represents difference between number of passengers before and after pilot implementation. The highest growth was in Vysočina region, where pilot project was testing new bus lines for new regional transport plan. On the basis of data from partners we can consider all pilots as successful.



10. Figure Mobile app screenshots, infokiosk at the railway station (to the right)

Qualitative indicators described the level of satisfaction allowed passengers to evaluate the pilots. Information were gathered from the survey on the specific sample of respondents using pilot results in area where the operation takes place. Users ranked the service on scale 1-5, ranging from 1 (not satisfied at all) to 5 (very satisfied). Partners included selected indicators relevant to their pilots. Fig 11 shows example of the results in South Bohemia region.



11. Figure Level of satisfaction with new bus service in South Bohemia region

The survey was realised among the users of new bus line (on board) in working days and on weekends in June and July 2018. There were 127 respondents - 8% of total passengers willing to answer the questionnaire. Satisfaction of users was high.

The key aspects of RUMOBIL strategy for the development of public transport in rural areas are the main goal of the project activities. They concern the necessity to contrast the population decreasing, the economic and technical self-sustainability in order to guarantee the transferability of the strategy outside the partner territories and beyond the end of the project, and the possibility to satisfy the users' needs.

The Strategy has been built on the identification of the solutions, in terms of concrete actions, and recommendations emerged from:

- 29 good practices collected in 17 different areas in 5 EU countries (11 in Germany, 2 in Italy, 4 in Austria, 2 in Czech Republic and 2 in Poland), specifically analysed and highlighted during the policy conference at Wittenberg about rural and peripheral areas' mobility;
- technological current state and the correlations with economic and demographic issues;
- analysis of the main requirements of a good "service strategy" able to satisfy the users' needs.

Solutions and recommendations have systematised consistently with the five types of actions to be done:

1. Transport network integration and coordination, in terms of service planning, intermodal nodes and public transport stakeholders' involvement

10 pilot experiences (some pilot have tested more than one action) and 4 good practice have been collected. Main common actions in the different cities have been oriented towards a double goal: improving the PT offer and/or its attractiveness. In fact, there can be observed plans of spatial densification of stations/stops and interchange terminals, better integration among existing services, as well as redefinition of timetables. All this goes along with a huge stakeholders' involvement, which is considered as an essential step for an efficient planning process. Last but not least, promotion campaigns, publicity, making people aware of implementations and innovations, is considered the perfect corollary, whatever the design object was.

2. Tariff system, in order to create and promote integrated systems



Consistent with pilot cases, good practices analysed and analysis and studies carried out, the actions regarding the upgrading of tariff systems have implemented in the framework of a wider set of solutions and tasks, which include often new services implementation, optimisation of interchange nodes and intermodality, etc.

3. New specific public transport services such as on-demand buses and local rail services

5 pilot experiences and 5 good practice have been collected. Analysing them, the introduction of new specific services is obviously needful. In particular, implementation of on demand services is the prevailing strategy, considered in all its potentialities. These are sometimes an integration to an existing PT service and aims to support it reaching low density areas or covering particular time frames, but in other cases they are even more important because they could represent the only PT alternative.

4. Infomobility in terms of traditional communication campaign and with focus on more innovative systems, such as apps, tools, etc.

6 pilot experiences (in Szabolcs Szatmár Bereg country were implemented 2 actions), 5 good practice and 5 IoT best practice have been collected. Strategies about infomobility are probably the ones more considered and various, and it could not be in a different way. Actions concern a lot of fields, all important to make a service more attractive and, above all, simple. Many of them refer to the matter of real-time information (which is for sure very heartfelt by users) that can really improve the perceived quality of a service. Other actions focus on helping people in their trip planning, to make useful decisions, while other propose to manage booking services and ticket buying to make users save time and troubles.

5. Social cohesion, promoting cultural and dissemination activities on the promotion of PT and also through the implementation of solutions to make easier the transport accessibility by disadvantaged people.

3 pilot experiences have been collected. This category of recommendations concerns social cohesion, considered as a complementary matter. In fact, the strategies which have been proposed aim to make people's awareness grow, operating with collateral actions, for example combining promotion campaigns with other events. In this way, people gathered for another reasons, can take part also to explanations and demonstrations regarding a new service or an implementation. In addition to this, a particular attention for disabled citizens is very important both for passengers with reduced mobility and for all people, to understand how the attention for the customer is deep.

The analysis highlighted the most common aspects of the practices analysed, in particular the needs to be satisfied in rural areas. The main results of the analysis on strategies, to be implemented in rural and peripheral areas, are represented by 9 practices, of which a single practice is related to each significant action, as follows:

1. PT stops/nodes design;
2. Promotion campaigns about PT services;
3. New tariff system;
4. Demand Responsive Transport services for rural areas;
5. Implementation of passenger information systems;
6. Services for disabled and elderly people;
7. Promotion of PT with other initiatives;
8. Implementation of new PT services;



9. PT services for tourists.

Each practice has been developed under the following headings:

- Problem to be tackled;
- Objective to be pursued;
- How to achieve the goal;
- How much (budget cost);
- Recommendations to be taken into account.

5. Lessons learned

The analysis of the good practices and outcomes from pilots collected during the project highlighted the following lessons learnt in order to develop an effective service to connect rural areas with bigger towns/secondary or tertiary transport hubs, here listed in order of importance coherently with what emerged:

- to implement an integrated and coordinate system in the most important nodes through a harmonised timetable and a selection of the best areas to create new nodes or renew older ones. Interchanges can range in size from a single stop to an intermodal station, but they should be always recognisable by the users. In this way, the users could find useful solutions to continue their own journey and reach the final destination;
- to implement a unified tariff system, including rail service;
- to enlarge the network to the surrounding areas and also beyond country borders, if they have mutual demand flow;
- to adopt DRT services in rural and peripheral areas, which are one of the most effective ways to serve low-density areas and to connect them with the “traditional” services and the main transport corridors;
- to involve small transport companies or taxi services as subcontractors to provide DRT services. In this light, an innovative on-demand taxi service could be implemented;
- to implement on-demand bus services organised with volunteer drivers, reducing substantially the operating cost of the service.
- to promote an info-mobility system also through web and mobile app, giving real-time information to users and increasing the quality and effectiveness of the interchange;
- to create an intermodal system also favouring the use of bike, often significantly used in rural areas through various types of facilities;
- to cooperate with the municipalities, regional district and regional PT companies, mainly in order to develop a real and effective integrate mobility system;
- to raise awareness on sustainable mobility among people in rural regions by campaigns;
- to do PT more accessible, as distance to stop is considered as a critical factor for accessibility of public transport especially for vulnerable PT users;
- to provide comfort is an important factor in residents’ choice of traffic mode. Improving comfort in vehicles and at bus stops and stations to attract more passengers received much attention from PT service operators and authorities in some partner regions.



- to aim at the social cohesion, particularly important in rural areas too often affected by a population aging.

6. Annexes

The aim of annexes is to describe the experience with the implementation of two pilots in the Czech Republic within the RUMOBIL project. As these are two different projects, we decided to divide this document into two parts for greater clarity and to describe each pilot separately. The first project was implemented in South Bohemia and represented the introduction of a completely new line in a rural area, some parts of which were not covered by public transport. The new line showed considerable potential for tourist transport. The second project took place in the Vysočina region and its aim was to verify passenger demand for new connections. The routes of some existing lines were modified and the existing lines were expanded on other connections. The project showed an increase in passenger interest in regular commuting.



LEARNING FROM RUMOBIL

ANNEXES



Title Learning from RUMOBIL - Annexes
Deliverable D.T2.1.2
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Contributors
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SOUTH BOHEMIA PILOT PROJECT



1. Objectives of the project

The pilot project in the South Bohemian Region represented the introduction of a completely new bus line connecting municipalities and villages in a low-density rural area. The starting point was the Kaplice railway station, located on the main railway line České Budějovice - Linz (TEN-T network), is 30 minutes away from the regional center of České Budějovice and 2.5 - 3 hours from the capital Prague. Area of pilot project area was covered by bus transport before, however, the existing lines were often slow, especially in connection with the regional city, some had to change several times, when the transfer times were too long due to poor connections. Half of the lines were in operation only on weekdays. The main goal of the introduction of the new line was to improve the transport service of the area in terms of reachability, to provide residents connection with the railway, which allowed comfortable and fast transfer not only to the regional centre but also to neighbouring regions or capital, so in frequency, when the line provided a larger number of connections per day and was in operation, including weekends and public holidays. The secondary goal of the line was to make the naturally unique area accessible to tourists. The ultimate goal, perhaps most important, was to improve the quality of life in the pilot area, and to keep the population here, in order to increase the number of people in the region.

2. Pilot/project preparations

2.1. Stakeholder involvement

2.1.1. Pre-realisation phase of project

In the preparation phase of the pilot project, the suggestions of the mayors of the municipalities of the South Bohemian Region, which are regularly collected by the JIKORD transport coordinator, were considered and a specific pilot site was selected. From the selected locality, the following stakeholders were invited to prepare a pilot project:

- the mayors and transport officers of the respective municipalities (Střítež, Besednice, Soběnov, Benešov nad Černou, Kaplice)
- carriers (winner of the public procurement bus operator ČSAD AUTOBUSY České Budějovice a.s. and railway operator České dráhy a.s.)
- representatives of the tourist destination (tourist organization Novohradsko-Doudlebsko/section of South Bohemian Tourist Board, NGO Hrady na Malši)

2.1.2. Realisation phase of project

During the implementation of the project, the role of individual stakeholders was as follows:

- the mayors and transport officers of the respective municipalities:
 - discussion on planning the new line (route, timetables),
 - assistance with advertising campaign: informing inhabitants about the line through municipal radios, local publications, municipal websites and placed promotional posters and leaflets in the municipal area) municipal office, notice board, shops.



- the carriers:
 - assistance with advertising campaign: placement posters and promotional materials on the building of bus and train stations in the South Bohemian Region, on their websites (in the case of rail operator - a nationwide website with tips for trips),
 - dispatching system: as one of the basic characteristics of the pilot project was the direct train-bus connection, it was necessary to ensure that carriers were informed of any potential threat to connections and that the situation was resolved. A very common phenomenon was the delay of trains, when the train carrier informed the bus operator, who waited for the arrival of the delayed train.
- representatives of the tourist destination:
 - assistance with advertising campaign: placement of promotional materials and information on tourist websites, in all information centers in the area, placement of information on websites and social networks
 - Hradý na Malši (NGO caring the ruins of castles) offered a discount of 30 % per entrance to the castle Pořešín and its castle museum, in case of having valid ticket for pilot line.

2.1.3. Post-realization phase of project

In the post-project phase, progress was made in cooperation with all stakeholders as follows:

- the mayors and transport officers of the respective municipalities:
 - discussion on the sustainability of the pilot line - modification of the route and timetables, which led to the design of a completely new connection through attractive tourist destinations for following years.
 - assistance with the advertising campaign of the following line.
- the carriers:
 - discussion on the sustainability of the pilot line - modification of the route and timetables,
 - assistance with the advertising campaign of the following line.
- representatives of the tourist destination:
- assistance with the advertising campaign of the following line.

The result of the follow-up cooperation was the inclusion of a modified line in the public service obligation in following years. The concept of the new line has been tested in 2019, testing will continue in 2020, the data obtained from 2019-2020 will be used for final modification of the new tourist line.

2.2. Methods and technologies

The following chapter summarizes the basic transport technologies used in the project.

- Public regular transport

Operation of regional public bus transport according to regular timetables according to a valid license in the public service obligation of the region, municipality or state. The regional line was operated under the obligation of the public service of the South Bohemian Region



- **Multimodal nodes**

In general, these are places where several modes of transport meet - usually the interconnection of bus and rail, with possible additional services, such as parking - P + R, K + R or bicycle stands in the B + R system. The pilot line was connected at the Kaplice-nádraží (railway station) interchange with regional and long-distance transport trains, where several parking spaces are also built for leaving cars and then continuing by public transport to the destination.

- **Ticketing system**

Passengers were checked in by purchasing a ticket from the bus driver. At the time of operating the bus line, it was not possible to use the option of payment by contactless payment or chip card. However, as part of the integration of transport, the JIKORD + ticket was recognized, which is valid for all public transport (except long-distance bus lines) in the South Bohemian Region.

- **Type of vehicle**

A small-capacity bus with at least 15 seats was required for the line. The carrier most often used a bus with a capacity of about 22 seats and one place for a pram / wheelchair. A larger bus was not required due to the assumption of low frequency and unsuitable conditions for the operation of a standard vehicle - narrow and confusing roads.

2.3. Risks and obstacles

2.3.1. Pre-realisation phase of project

During the preparation of the pilot projects, the following obstacles occurred and their subsequent overcome:

- **Problems during the tender**

In the first round of the tender, no applicant submitted a bid, the need arose for the second round, the administration of which caused a delay of approx. 2 months and thus endangered the beginning of the pilot project. Thanks to the help of the staff of the transport department in the preparation of subsequent documentation (license approval and timetable) in a short period of time, the project was launched on time

- **Later start of the pilot project due to traffic conditions in the area**

The target area had poor quality roads, which are not maintained in all sections in the winter and traffic in the time period defined in the AF would not meet safety conditions. The solution to the problem was to move the implementation date to a suitable time of year.

- **Failure to include all stakeholder requirements**

Some municipalities requested a change of pilot route; however, such an adjustment would strengthen existing connections and the line would lose its innovative character as defined in the project objectives. The solution was the promise to include these requirements in any subsequent line planning.

2.3.2. Realisation phase of project

There were no major problems or obstacles during the pilot operation. Nevertheless, before operation, we defined potential threats and proposals for their solution:



- Low number of passengers using new line: the inhabitants of the area were dependent on the ownership of a motor vehicle that was very widespread and there was a possibility that they will prefer to drive by car and not to use public transport, the use of cars is more comfort (for example for shopping) and people are time-independent. The bigger potential lied in tourist then in local inhabitant.
- Lack of new passenger, short implementation time - Almost all of local inhabitant owned a car (because until now somewhere the public transport was very limited). People who owns car do not have usually interest to change their transport habits, also the very short time of implementation of pilot (4 month) was not in favour. To mitigate the risk, that the number of passengers will be low, we tried to inform every inhabitant in the area (every household got a leaflet, used the local radio informing about new line, placed many posters in each village in area). On the other hand, we tried to find another possible passenger - tourists. A relatively massive public campaign served as mitigation to this risk.
- Short implementation period - the pilot line should be in operation for 4 months; this time may be short to change the habits of the population. The second main problem was that this line did not include the whole touristic season, there was need to fill gap in August and September. We found possibilities that bus operator will launch a Regional grant for touristic transport, but this step was only on operator and it depended on its will.
- Communication with stakeholders - the communication with stakeholders was sometimes very hard, especially in waiting for an answer and asking for think which they do for free (but was offered to us).
- Non-connectivity of public transport in intermodal point - The situation in intermodal point Kaplice station before was that the bus schedules and trains schedules did not respect each other and it was almost impossible to use this station for transferring between these two kinds of public transport (there was only possible to transfer from car to train - a new P+R is here). Our project had an ambition to ensure transfer between train and bus (connection of rural are to TEN-T network), but the problem was that in South Bohemia still has not existed a common dispatching Centre for all kind of public transport. PTO did not communicate together, and no one knew about delayed lines. Especially trains were often delayed here and from that reason we set up a dispatching service with precisely defined rules (forwarding information on delayed connections, occurrence of passengers using traceability) to prevent the disruption of connectivity between bus and train.
- Insufficient information campaign to local residents and tourists
- To overcome this threat, cooperation with municipalities, carriers has been established with aim to inform local residents. For informing tourists, mutual cooperation was established between JIKORD, carriers and tourist organizations. This collaboration proved to be very effective, the cost of materials production was covered by JIKORD, but all stakeholders offered the distribution of the advertising material by the means available to them (stations, vehicles, corporate and social networking, reduced entry to tourist attractions) free of charge, this meant greatly budget savings on the other hand and massive expansion among target groups on the other. At the same time, each interested subject was mentioned in all the promotional materials, thus meant also mutual promotion and mutual benefit.



3. Pilot/project implementation

3.1. Pre-realisation phase

- Collecting indicators before

During the autumn of 2017, indicators were collected to determine the current situation before the implementation of the pilot project. The indicators consisted of both demographic data, operating parameters (such as the number of existing connections, the number of passengers transported, the frequency of services, etc.). Demographic data were obtained from the Statistical and Cartographic Office, data on operating parameters from the PT providers themselves.

- Planning of line and tender procedure

Route - Within the route, it was planned to establish a completely new bus stop. Due to the new legislation (Act No. 304/2017) and its obstacles, this was not possible. Therefore, there was a small change in the planned route.

Timetables - Timetables were synchronized with train timetables after their release in December.

Term of operation - Operation time was designed to meet the required objectives and bring a new public transport line to local residents (= operation in the standard working week and school year) and provide secondary service to tourists (= tourist season, weekends and summer holidays). It was also necessary to consider climatic conditions and irregular road maintenance in winter, which under the current conditions did not allow safe operation from November to March. The last aspect of the term of operation was the financial budget of the project, enabling the operation of the line for a limited time in each time schedule.

Technical specification of the vehicle - A small-capacity bus with 15 seats was chosen as the vehicle type.

- Tender Procedure

Based on the previous steps, a tender was launched which had to be repeated (no tender was submitted in the first round). In the end, a suitable service provider was selected, and the whole procedure was approved by the FLC and the Regional Council.

- Informing of local stakeholders

New line was discussed at the meeting and the mayors, we had a very stimulating discussion on the project. Unfortunately, not all the requirements of the mayors were considered as they did not meet the objectives and conditions of the project.

- Public campaign

An advertising campaign was launched before the operation. During the preparatory campaign, it was necessary to consider attributes such as the area, population, hours of operation and the possibility of tourist attractions in the area. We also involved stakeholders who provided great help.

3.2. Realisation phase

Operation of bus

The new line was launched on April 1, 2018 during the Easter holidays. Then the bus ran with a frequency of 16 connections every day (including Saturdays, Sundays and public holidays). There were no serious problems or complications during operation.

Qualitative survey



During the operation of the line, a satisfaction survey of the new service was conducted among passengers.

3.3. Post- realisation phase

- Evaluation of line operation
 - After the end of the line operation, detailed data were obtained from the carrier concerning the complete frequency of passengers used to evaluate the line.
- Collection and evaluation of indicators
 - After the operation, the set indicators were collected for possibility to compare the situation before the operation with the situation in the operation of the line. Satisfaction surveys among passengers were evaluated within the indicators.
- Stakeholders seminar
 - All obtained knowledge was presented to stakeholders at two final seminars. One of them was intended for directly involved stakeholders (mayors, carriers, tourist organizations), the other was intended for policy makers at the regional level.
- Planning of sustainability of line
 - In connection with the results of the pilot project, the route, timetables were modified and one of the existing lines was extended over the summer to include tourist services covering the pilot area. Extended connections were included in the public transport obligation of the South Bohemian Region for years 2019 - 2021.

3.4. Project cost

Project implementation costs consisted of operational costs, personnel costs and advertising campaign costs.

■ Operational cost

Operational cost consisted of operation of bus line and operating the service of dispatching for ensure the connection between the trains and bus (both were operated by different public transport operator).

Operation of bus	44 815 EUR incl. VAT
Operation of dispatching	2 380 EUR incl. VAT

■ Personnel cost

The personnel cost consisted of work of project employees. It consisted of:

- Technical planning of pilot project: at least **10 days** (planning) + **3 days** (on site)
- Meeting with stakeholders (more times): at least **3 days** meeting
- Tender procedure (preparing a call, administration, attendance in evaluation commission, evaluation, preparing a contract, administration for the Council of the region): at least **10 days** (preparing call) + **1 month** (administration), the whole tender procedure was long 6 months!!!
- Preparing a new bus stop: at least **5 days** (2 day on site, 3 days with stakeholders at offices)



- Attendance in approval processes of timetables and bus license for operating: at least **2 days**
- Preparing and operating a public campaign (cooperation with graphical studio for design, personnel campaign with area before pilot and during the pilot): at least **5 day** (preparing) + **10 days** (on site before) + **10 days** (on site during) + **5 days** (in another offices, presentations) + **10 days** (online campaign)
- Monthly evaluation of operation (frequency of sold tickets): **1 days** (every month)

■ **Publicity campaign cost**

A publicity campaign cost consisted from: graphical design of leaflets, posters and brochures on JIKORD sides and on Czech Railways side, printing of materials and Facebook online campaign.

Publicity campaign	Planned cost	Actual cost
Graphical design, printing materials (posters, leaflets, brochures)	4 500 EUR incl. VAT	1 750 EUR incl. VAT
Facebook		180 EUR incl. VAT
TOTAL		1 930 EUR incl. VAT

A lot of saving was due to the offers of involved stakeholders - especially PTO - bus and train operators for free placement of information materials to railway stations, bus stations, to vehicles, to national webpages and their Facebooks pages, also great saving was due to sharing our Facebook post by South Bohemia tourist information and public authorities webs and Facebook profiles.

4. Results

The pilot project in South Bohemia was the launch of a regular bus line based on traditional transport technology (regular operation with a fixed timetable and a fixed operating route according to the license. The importance of the pilot operation consisted of the establishing connection of the rural region to the TEN-T network, especially on the Linz - České Budějovice (-Praha) intercity trains, which enabled a quick connection to the regional or capital city for work and study and other services. In the opposite direction, the pilot project allowed tourists access to a naturally unique and less-visited area. The line helped to improve the availability of public transport in the area (including weekends and public holidays, especially in places where access was not available), but the interest of local populations did not meet the demand that would lead to the inclusion pilot line in same extent to the public transport obligation. Most residents own a passenger car and are not interested in changing this means for public transport, despite the fact that the length of travel time to the regional city of České Budějovice or the capital city of Prague was comparable with the pilot bus and following train, and public transport passengers did not have to deal with problematic parking (problematic in terms of parking zones). Also, economic efficiency of public transport did not convince the residents. To change this unfavourable situation local governments should encourage and promote public transportation more. E.g. personalized travel marketing, accompanied by other hard and soft measures, and with the possibility for participants to give feedback on the existing public transport services in their region, could be an efficient way to increase awareness and encourage more people to use public transport more often in rural areas. The secondary objective - to allow tourists access to the area - has been fulfilled. Despite the short test period of the pilot project, which covered the tourist season for



only 3 months, there was a considerable interest of both individual tourists and organized groups (senior clubs, tourists clubs, scouts and campsites, but also schools that used the bus for a school trips). For this reason, the line was geographically adjusted, timed and included into a public service obligation as an extended tourist service.

4.1. Evaluation of line operation

The operation of the buses was smooth and there were no serious complications within four months. Thanks to the analysis of the data provided by the carrier, the following facts emerge, which, among other things, served to plan the sustainability of the line (ie to implement tourist connections in the public service obligation).

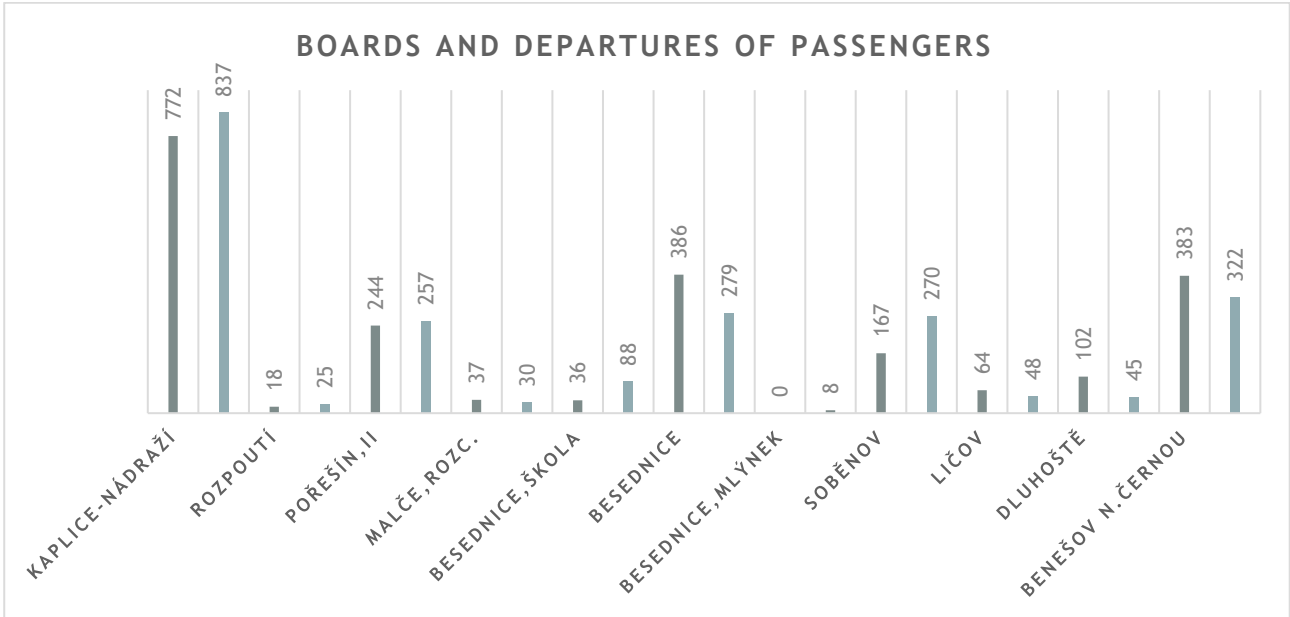
The most important characteristics of operation and costs

Total km:	30 175 km
Total number of passengers:	2 209 passengers
Total cost:	1 180 000 CZK incl. VAT (47 200 EUR)

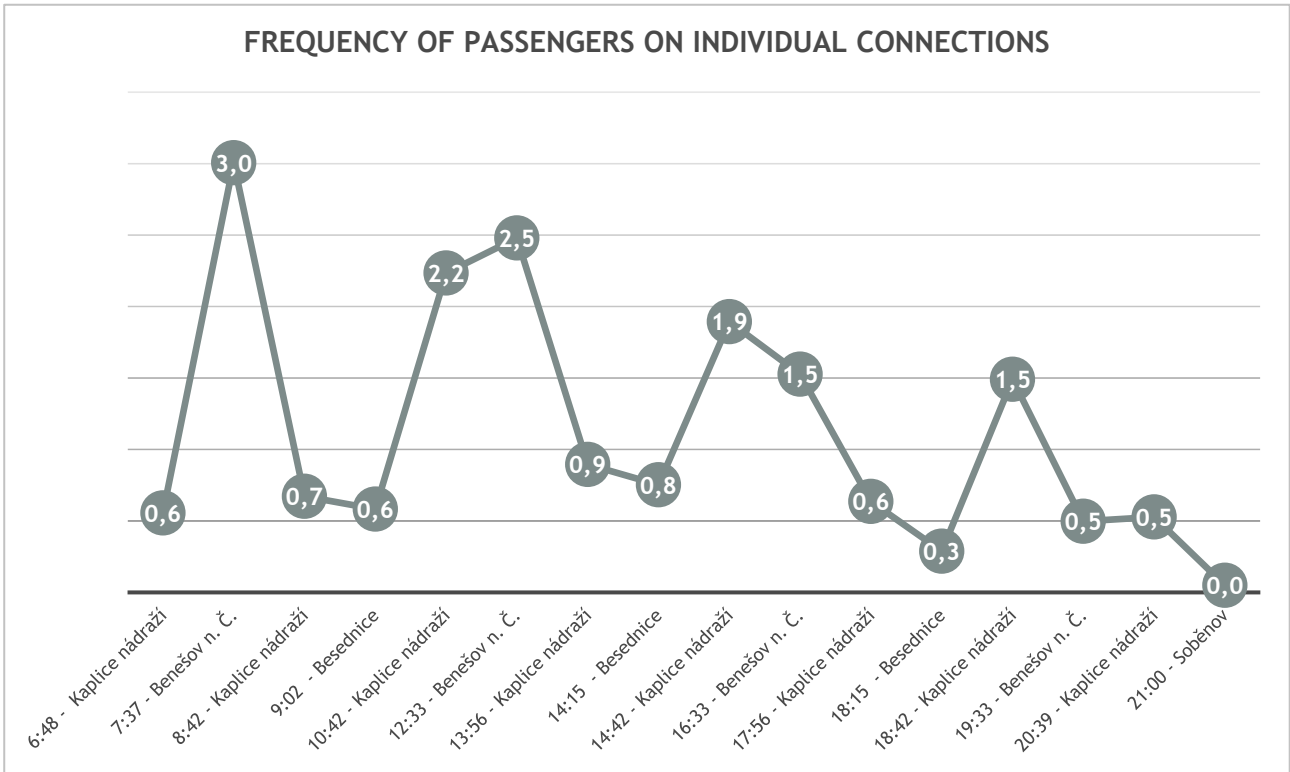
The following graphs evaluate the number of passengers and their time distribution in more detail.



Graph 1 shows an upward trend in passenger growth. This tendency was mainly due to improving weather and the start of the tourist season in May. The tendency also shows a gradual habituation of the passengers to the new connection.



Graph 2 shows the importance of the intermodal point Kaplice-nádraží. An important aspect of the pilot line was the direct connection to train connections to and from České Budějovice, which was used to a large extent by passengers.



Graph. 3 shows that the inhabitants of the region welcomed the morning connection to České Budějovice at 9 am, from the point of view of tourism, morning and afternoon connections proved to be important. The occupancy of afternoon connections is more fragmented due to the different end of trips or working hours.



4.2. Evaluation of quantitative technical and operational indicators

Indicators were used for the objective evaluation of the pilot project. These indicators were collected before the start of operation (autumn 2017) and during operation. As the indicators relate to the normal working day, the collection period was chosen for June 2018 (ie the period outside the school holidays). Here are the most important results:

Number of passengers (working day)

Before: 208
After: 230

Description: During the period of operation, there was an increase in passengers by an average of 22 per day. In a more detailed assessment, it was found that there was no decrease in passengers on existing lines and the increase is due to the introduction of a new line and the acquisition of new passengers. This fact is perceived very positively.

Number of lines

Before: 5 (1 train, 4 bus)
After: 6 (1 train, 5 bus)

Description: increase of the indicator due to the introduction of a new line.

Number of passengers using stops (working day)

Before: 414
After: 452

Description: The growing tendency to use stops correlates with the increased number of passengers.

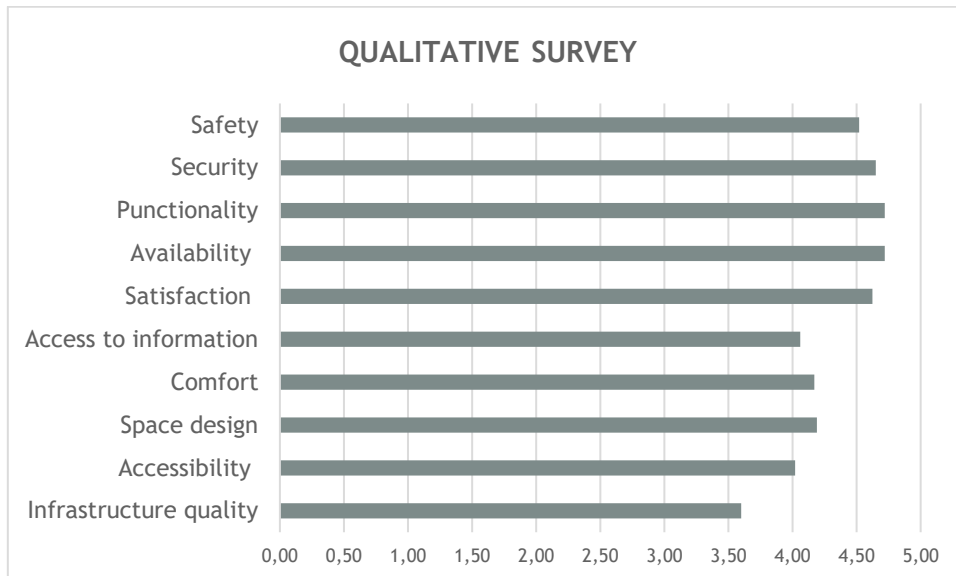
Offered capacity (number of places per km)

Before: 10,5 (bus)
After: 12 (bus)

Description: Increase of the indicator due to the introduction of a new line of small-capacity bus.

4.3. Evaluation of quantitative indicators (satisfaction survey)

As another background material for the evaluation of the pilot operation of the bus line was a questionnaire for the passengers themselves. A total of 127 questionnaires were collected in June and July 2018, which represented approximately 6 % of passengers (in reality, the number is higher due to the repeated use of the line by the same passengers). The answers to the questions were scaled on a scale of one to five (one - worst, five - best). The aim was to find out the basic indicators of the quality of existing services and newly offered services.



The chart 4 shows a considerable connection between passengers and the newly introduced service and its quality. It should be noted, however, that gaps were found in related services, especially in the lack and quality of existing accommodation and catering facilities, the state of transport infrastructure in the area (roads, stops) and worse evaluation of the transfer terminal Kaplice-nádraží (both in terms of access for elderly residents, aesthetically also in terms of comfort and convenience).

5. Lessons learned

Positive experiences

- In spite of time-consuming own activities and administration, willingness and involvement of mayors in the planning of operation and providing synergies in the advertising campaign.
- Effective and beneficial establishment of co-operation between bus and train operators in the implementation of the dispatching centre to ensure the connection between bus and trains.
- Collaboration during the public campaign, when every subject offered a certain kind of cooperation free of charge.

Negative experiences

- Time-consuming tender process
- Complaints during the tender procedure (administrative complications when establishing different deadlines and authorizations for the Council of the South Bohemian Region and for FLC)
- Strict conditions for compliance with EU project rules and the tender rules in Czech Republic (in particular the minimal possibility of modifying the pilot line operation conditions against the conditions which were defined in the call for tender - the impossibility of setting up the alternative route during the pilot, the impossibility of change the number of connections and timetables according to the current conditions.
- The need for greater involvement of local stakeholders (municipalities), authorities have a lot of their own work and do not have too much time for free work beyond their activities, perhaps financial compensation for responsible persons for municipalities could help.

Recommendations



-
- Precise planning and enough planning time
 - Effective advertising campaign is half the project's success
 - Effective cooperation with the stakeholders will benefit all parties



VYSOČINA PILOT PROJECT



1. Objectives of the project

Public transport in Vysočina region depends on its rural character, fragmented settlement structure and absence of a single central hub with high gravity. Since past few years, the Vysočina Region has been preparing the concept of a new regional integrated transport system “Public Transport of Vysočina” and intended to launch it in 2019. The ambition was to optimize public transport services for the territory of the region by means of close interlinking railway, bus and intercity transport and to introduced a unified tariff system. Together with the efforts towards the “Public Transport of Vysočina” conception, the RUMOBIL pilot therefore aimed at improving offer of public transport connections as a key condition for development of mobility of population, in terms of linking rural areas to major settlements as well as to transport networks of national and EU importance. The pilot strived to test and verify demand for new public bus transport connections in the context of a territory with fragmented settlement structure and in the context of preparation of the “Public Transport of Vysočina” conception.

2. Pilot/project preparations

2.1. Stakeholder involvement

Among key stakeholders of Vysočina region has been identified:

- municipalities within the regional territory
- the state (Ministry of Transport)
- transport operators (bus operators, Czech Railways)
- infrastructure managers (the Regional Road Administration and Maintenance of Vysočina, the Directorate of Roads and Highways, the Railway Infrastructure Administration)
- passengers/general public
- other (the Regional Chamber of Commerce, the Transport Inspectorate of the Czech Police, relevant NGOs, local interest and action groups, media)

For what concerns the pilot planning and implementation themselves, the Vysočina Region addressed, in particular, municipalities and their inhabitants in vicinity of the pilot lines and public bus transport operators who provide services in these areas. The main communication activities towards these groups involved:

- announcement of the project support
- announcement of the project start, kick-off meeting
- introductory meeting with stakeholders, presentation and discussion of the project and the pilot
- negotiations with relevant transport operators, preparation of contract terms for 2017
- start of publicity campaign for potential passengers on pilot lines (website, newspaper, promotional leaflets)
- art competition for students of primary and secondary schools, to draw or paint what they feel as the most pressing problem of public transport in the city or village they live in
- second part of the publicity campaign (promotional leaflets distributed to households alongside the pilot lines)
- negotiations with relevant transport operators, preparation of contract terms for 2018



- organisation of visit to the pilot site for the RUMOBIL partners and their stakeholders
- During the whole implementation period - update of information for stakeholders (website, e-mail communication, meetings if needed), regular internal meetings to organise, monitor and evaluate the pilot progress

2.2. Methods and technologies

The approach and used technologies were based on good practices identified by the transnational partnership. The proposed measures combined 'standard' existing solutions, designed by the current regional public transport system, with ongoing preparations to launch the integrated system "Public Transport of Vysočina". Developing such a system will facilitate easy and accessible mobility between rural areas and important regional nodes, where access to the national and European (TEN-T) transport network is available.

2.3. Risks and obstacles

2.3.1. Pre-realisation phase of project

V preparation phase no problems occurred.

2.3.2. Realisation phase of project

Generally, the pilot implementation has been running smoothly, as foreseen. A slight modification of timetable on one of the pilot lines has become necessary. However, for what concerns the pilot connections, no major changes occurred. Among important factors that influenced the financial aspect of the pilot implementation, we have to mention:

- significant increase in labour costs of bus drivers in public transport, which occurred during 2017 in the whole Czech Republic. This increase is, consequently, reflected in higher operation costs of public transport.
- current development of CZK/EUR conversion rates. In the situation when pilot costs are paid in CZK and the EU contribution is refunded in EUR, we face implications of the appreciating Czech currency. In practice, it means that the available RUMOBIL budget will be able to finance the pilot implementation for a shorter period than expected before the project submission.

3. Pilot/project implementation

3.1. Pre-realisation phase

In the preparation phase of the pilot, a thorough analysis of the current situation was carried out, including specification of the pilot locality, identification of concrete measures, list of public transport connections for the pilot and estimated costs of their operation. Based on this analysis, the pilot focused on testing of the following measures:

- **Introduction of new public bus transport connections along the route Jihlava - Brtnice - Okříšky - Třebíč** and modification of several existing ones to improve connection of small rural municipalities to 2 important regional nodal points (Jihlava, Třebíč)



- **Introduction of new services in surrounding along the route Velké Meziříčí - Chlumeck** for better connection of small rural municipalities within its hinterlands to the town
- **Introduction of new public bus transport connections along the route Světlá nad Sázavou - Lipnice nad Sázavou** to strengthen connections to a locality of tourist interest as well as to interchange points with railway
- **Introduction of new public bus transport connections along the route Jihlava - Havlíčkův Brod** and modifications of existing connections with a view to improve connection of small rural municipalities to 2 important regional nodal points (Jihlava, Havlíčkův Brod)

New public bus transport connections were ensured by transport operators on the basis of their long-term contracts with the Vysočina Region. These contracts were valid till 2019 and they were amended each year in order to specify the exact scope of transport services to be secured during the given year and to set the maximal amount of financial compensation by the region. Amendments to the contracts with relevant transport operators, who run the pilot connections, were concluded during February and March 2017.

3.2. Realisation phase

The pilot implementation itself then started in March 2017 (the connections along the route Světlá nad Sázavou - Lipnice nad Sázavou in April 2017) and was accompanied by a publicity campaign with a view to raise awareness about the new connections and attract new passengers to public transport. Throughout the realisation phase of the pilot, the Vysočina Region continued implementation of the pilot and testing the selected measures, that have been chosen as a result of a thorough analysis of the current situation.

During the 4th quarter of 2017, amendments to the existing long-term contracts with pilot bus transport operators for year 2018 have been prepared, with a view of their conclusion early in 2018. The scope of public transport services to be ensured (both the services co-financed by the RUMOBIL project as well as those financed by the region itself) has been defined by the Vysočina Regional Assembly, as foreseen by the national legislation:

- Act No. 129/2000, Collection of Laws, on regions
- Act No 194/2010, Collection of Laws, on public services in passenger transport

In December 2017, the second part of the publicity campaign followed to raise awareness about the offered pilot connections and attract new passengers. This part of the campaign contained distribution of information leaflets to households located in the vicinity of the pilot buses routes as well as information on the website.

3.3. Post-realisation phase

- Evaluation of the operation

After operation, detailed data were obtained from the carrier concerning the complete frequency of passengers, used for the operational evaluation of the line.

- Collection and evaluation of indicators

After the operation, the set indicators were collected for possibility to compare the situation before the operation with the situation during the operation of the lines. Questionnaire among passengers was evaluated within the indicators.



- Sustainability of pilot project

However, the end of the pilot period does not mean that operation of the above-mentioned connections will cease after 30 June 2018. The introduced connections will continue, as foreseen by the valid contracts between the region and the relevant operators, and, in the future, they are expected to be included into the emerging regional integrated transport system - “Public Transport of Vysočina”.

3.4. Project cost

The project implementation costs consisted of operating costs and personnel costs.

- Operational resources

As foreseen by the Interreg CENTRAL EUROPE implementation rules, the Vysočina Region ensured full pre-financing of all activities, with the EU contribution to be refunded later after successful verification process by the FLC and the JS.

The share of the RUMOBIL budget allocated the amount of EUR 108 750 for pilot implementation. Total costs, meaning total compensation to the transport operators by the region (as explained above), reached more than 4 mil. CZK / approx. 159 000 EUR¹.

The detailed breakdown for the pilot period (March 2017 - June 2018) is listed in the table below.

Three of the four operators were running the pilot connections throughout the whole pilot period; the pilot line of the operator ARRIVA Východní Čechy has a seasonal character and was not operated in the winter months.

¹ The EU/CZK conversion rate varies depending on the month when the relevant expenditure was submitted to FLC verification.



TOTAL COSTS OF PILOT IMPLEMENTATION PER OPERATOR[□]		
Operator[□]	Total CZK[□]	Total EUR[□]
ICOM-transport, a.s. [□]	1 199 666,66 [□]	46 510,81 [□]
TRADO-BUS s.r.o. [□]	1 210 662,56 [□]	46 936,91 [□]
ARRIVA Východní Čechy, a.s. [□]	141 433,72 [□]	5 509,12 [□]
ZDAR, a.s. [□]	225 500,00 [□]	8 768,82 [□]
<u>Subtotal (RUMOBIL share)[□]</u>	2 777 262,94 CZK[◄] <i>EU contribution[◄]</i> 2 360 673,50 (85%)[◄] <i>Co-financing[◄]</i> 416 589,44 CZK (15%)[□]	107 725,66 EUR[◄] <i>EU contribution[◄]</i> 91 566,81 EUR (85%)[◄] <i>Co-financing[◄]</i> 16 158,85 EUR (15%)[□]
[□]		
ICOM-transport, a.s. [□]	513 333,32 [□]	19 869,69 [□]
TRADO-BUS s.r.o. [□]	618 666,64 [□]	23 946,84 [□]
ARRIVA Východní Čechy, a.s. [□]	63 000,00 [□]	2 438,55 [□]
ZDAR, a.s. [□]	122 500,00 [□]	4 741,63 [□]
<u>Subtotal (additional own resources)[□]</u>	1 317 499,96[□]	50 996,71[□]
[□]		
TOTAL COSTS[□]	4 094 762,90 CZK[□]	158 722,37 EUR[□]

■ Personnel resources

The pilot as well as the whole RUMOBIL project implementation is being ensured by relevant departments of the Regional Authority of the Vysočina Region, the executive body of the Vysočina Region, that performs tasks defined by the regional decision-making organs (the assembly, the council).

The *Department of Regional Development* was responsible for the overall project management and coordination, both for the activity part and financial aspects, including communication and PR issues. It ensured communication with the project Lead partner and WP leaders, as well as with external experts and the national FLC body. The team consisted of Iveta Fryšová (main coordinator), Lenka Matoušková (project manager) and Božena Šprynarová (financial manager).

The *Department of Transport and Road Administration*, especially its section of transport services, answered for the technical part of the project. Concerning the pilot implementation, this department ensured and coordinated the whole activity from its planning phase (identification and selection of pilot measures, contracting the public transport services, communication with transport operators), over implementation (collection and monitoring of relevant data), up to the final phase and evaluation of the pilot results. Besides the pilot test, this department provided necessary expertise for other key project activities, such as the RUMOBIL Strategy or the public transport demand prognosis. Key team members are Radek Handa and Pavel Bartoš.



4. Results

The RUMOBIL pilot in the Vysočina Region aimed at improving offer of public transport connections as a key condition for development of mobility of population, in terms of linking rural areas to major settlements and, through them, to transport networks of national and EU importance. The pilot strived to test and verify demand for new public bus transport connections in the context of a territory with fragmented settlement structure and in the context of preparation of the “Public Transport of Vysočina” conception.

The pilot contributed to the project WP T2 objectives to experiment innovative approaches for public passenger transport in peripheral areas. The approach and technologies applied in the Vysočina pilot test were based on good practices identified by the transnational partnership. The proposed and tested measures combined “standard” existing solutions, designed by the current regional public transport system, with ongoing preparations to launch the future integrated system “Public Transport of Vysočina”. Developing such a system will facilitate easy and accessible mobility between rural areas and important regional nodes, where access to the national and European (TEN-T) transport network is available.

4.1. Evaluation of pilot lines operation

Sum up the whole pilot period (March 2017 - June 2018), there was a total of 34 newly introduced public bus transport connections, operated on 4 existing lines, both on working days and at weekends, by 4 bus transport operators.

PILOT IMPLEMENTATION SUMMARY			
<i>Operator</i>	<i>Line</i>	<i>No. of pilot connections</i>	<i>Frequency</i>
ICOM transport, a.s.	760600 <u>Jihlava – Havlíčkův Brod</u>	15	<u>working days, weekends</u>
TRADO-BUS s.r.o.	790250 <u>Jihlava – Brtnice – Okříšky – Třebíč</u>	10	<u>weekends</u>
ARRIVA Východní Čechy, a.s.	600620 <u>Světlá nad Sázavou – Lipnice nad Sázavou</u>	6	<u>weekends</u>
ZDAR, a.s.	840212 <u>Velké Meziříčí – Chlumeck</u>	3	<u>working days</u>

During this period, buses on pilot connections covered a total distance of almost 204 000 kilometers and transported more than 75 000 passengers.



SUMMARY OF PILOT PERIOD, 3/2017 - 6/2018				
Line	Operator	No. of pilot connections	Number of kilometres	Number of passengers
840212	ZDAR	3	28 294	11 124
600620	ARRIVA*	6	7 128	7 094
760600	ICOM	15	92 384	36 302
790250	TRAD-OBUS	10	76 072	21 196
Total		34	203 878	75 716

* seasonal character of operation, from April till October

4.2. Evaluation of qualitative technical and operational indicators

Indicators were used for the objective evaluation of the pilot project. These indicators were collected before and during operation. Here are the most important results:

Number of passengers (working day)

Increase in passengers by 28.33%

Number of lines

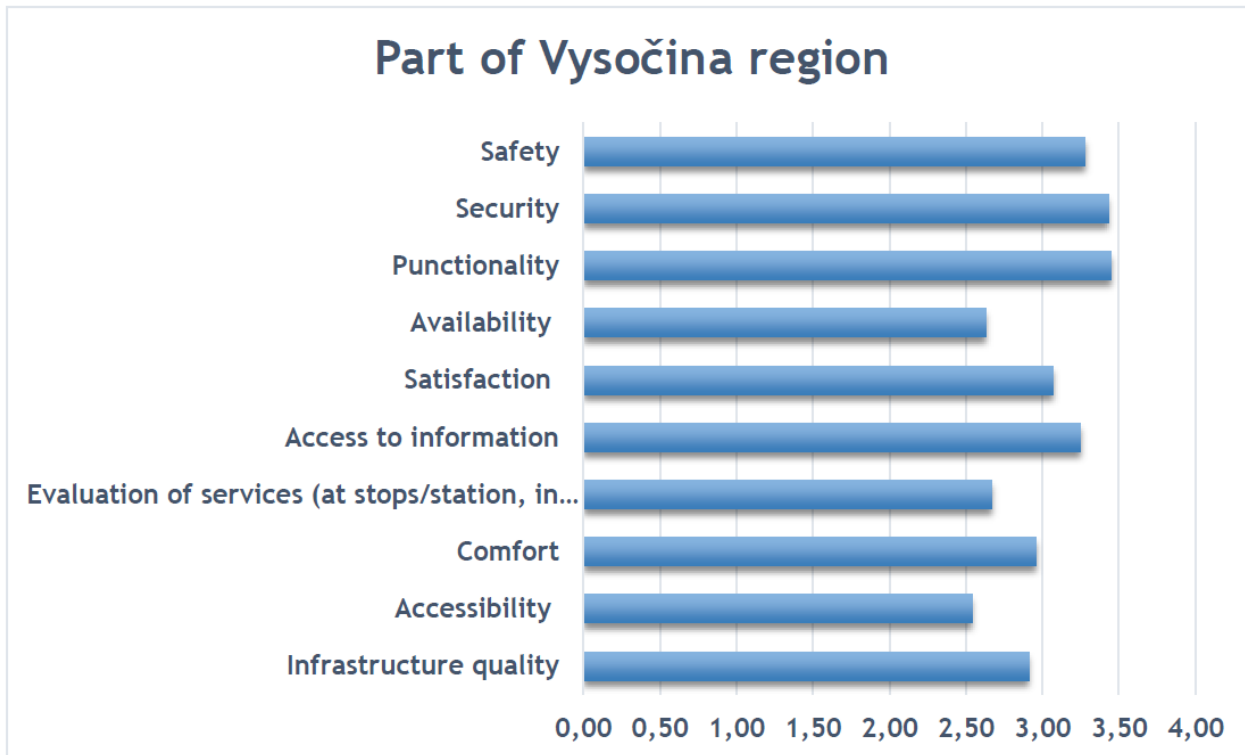
Before: 6 lines and 40 connections (1 train, 4 bus)

After: 6 and 50 connections

Description: increase of the indicator due to an increase in the number of pilot connections

4.3. Evaluation of quantitative indicators (satisfaction survey)

As another background material for the evaluation of the pilot operation of the bus line was a questionnaire for the passengers themselves. Data were collected through a qualitative survey among inhabitants of the Vysočina Region, which was carried out during April 2018. The survey concerned the field of public transport as a whole, with a view to identify level of passenger satisfaction with various aspects of regional public transport, as well as to better understand why people do (not) use public transport and what are the major needs and problems that should be tackled by the regional government in the environment of social and demographic change. The survey was carried out by means of on-line questionnaire addressed to 15 000 potential respondents. The final sample reached 1 647 respondents of various age, sex and social status. It can be said, that user satisfaction is slightly over the average.

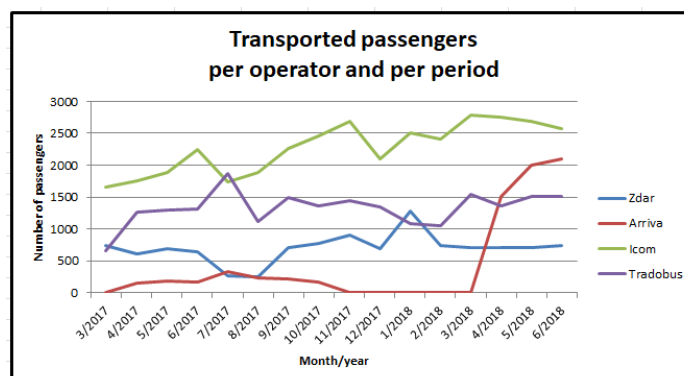


5. Lessons learned

The pilot implementation ran quite smoothly, without any major problems. All newly introduced public bus transport connections were duly operated according to their timetables and the relevant transport operators were submitting financial statements on these connections on the monthly basis.

The pilot connections contributed to improve accessibility of rural municipalities and their connection to important nodes of regional or subregional importance, that are significant centres of education, employment and various public services for the inhabitants (regional capital Jihlava, cities of Třebíč and Havlíčkův Brod, town of Velké Meziříčí). Of course, these centres also serve as traffic junctions and interchange points between transport modes. One of the pilot lines also strengthened connection to the locality of Světlá nad Sázavou and Lipnice nad Sázavou, which is an attractive tourist destination as well as an important interchange point with railway.

Development trend of passenger flows on the pilot connections throughout the pilot period (March 2017 - June 2018) is illustrated in the graph below.





It is evident that passenger flows have been relatively constant throughout the whole pilot period, with some fluctuations:

Lower numbers of passengers on all the lines at the pilot start (March, April 2017) can be explained by the fact that the pilot connections were new and some potential passengers might not have known about them yet, which subsequently changed, besides other things due to the publicity campaign.

Lower numbers in summer months on some lines (Icom, Zdar) can be attributed to holiday time. These lines are operated on working days (some of the Icom lines also at weekends). In the Czech Republic, in the months of July and August, there are school summer holidays, when students do not commute to schools and less employees commute to work. This “holiday effect” is not so visible in the case of the Trado-bus line, as this line is operated at weekends only.

A smaller drop in passenger numbers can be seen in December as well and can, analogically, be related to holiday period that occur at Christmas and New Year’s Eve time.

The flows at the Arriva line show a little different trend, as this line has a seasonal character of operation and is only running at weekends from April to October. It leads to an interesting tourist destination and is targeted not just at daily commuters to school or work, but at tourists and visitors as well, possibly also from outside the region. Although it has not gained that many passengers in 2017, the situation changed and the number of passengers has significantly grown this year. Great interest in this line so far in 2018 has, perhaps, been supported also by a beautiful and unusually warm spring.

With regard to this experience and lessons learnt, the intention of the regional government is to sustain the pilot connections beyond RUMOBIL lifetime and to include them into the emerging integrated system “Public Transport of Vysocina” conception, whose shape is being prepared and detailedly negotiated with municipalities and other relevant stakeholders. In parallel to integration and tariff unification, the region also prepares the tender documentation to select public transport operators, who will secure transport services within the new system. The current long-term contracts are valid till 1 November 2019 and it will not be possible to amend them anymore. As foreseen by the national and European legislation, the region is obliged to award new contracts, based on an open procurement procedure, till the end of 2019.